UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,001	03/12/2004	Bernd Schmandt	LLP113US	7567

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ESCHWEILER & ASSOCIATES, LLC
NATIONAL CITY BANK BUILDING
629 EUCLID AVE., SUITE 1000
CLEVELAND, OH 44114

EXAMINER
FLORES, LEON

ART UNIT	PAPER NUMBER
2611	

MAIL DATE	DELIVERY MODE
05/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 March 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *   c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)   Paper No(s)/Mail Date *11/21/2005*.

4)☐ Interview Summary (PTO-413)   Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

Priority

1.   Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which

papers have been placed of record in the file.

Claim Objections

2.   **Claims (1-3, 8, 10, 13, 16-19) objected to because of the following**

informalities: The limitation **"if"** should be replaced with **"when"** in order to avoid

indefiniteness. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   **Claims (1-19) are rejected under 35 U.S.C. 102(b) as being anticipated by**

Gan et al (hereinafter Gan) (US Patent 7,027,418 B2).

Re claim 1, Gan discloses a method for selecting frequency channels in a data

transmission method that uses a frequency hopping method, comprising: determining

an existence of interference on a frequency channel by detecting multiple erroneous

transmissions in the frequency channel (See col. 7, lines 51-55); eliminating the

frequency channel from a frequency hopping sequence if a determination is made that

interference exists thereon (See col. 6, lines 30-34); measuring a strength of external signals within a frequency range of an eliminated frequency channel (See col. 6, lines 47-48, 50-54, 63 – col. 7, line 2, col. 7, lines 51-55, col. 12, lines 36-39); and reinserting the frequency channel into the frequency hopping sequence if the measured strength is below a prescribed threshold value (See col. 20, lines 46-52, col. 12, lines 36-39. Re-testing and re-determination of the channel performance must be done in order to select good channels and not bad channels. This is due to interference changing over time - some "previously good channels may become bad and vice versa". One way to retest the channels is to measure the RSSI of the channel. If "there is no interference, the RSSI will be low".

Re claim 2, Gan further discloses that wherein interference in the frequency channel is determined if a number of erroneous transmissions exceeds a number of error-free transmissions by a prescribed threshold value within a predetermined period of time. (See col. 15, lines 25-33 and table 1. In table 1, Channels 1 & 2 are classified as bad channels because the tests results shows that the number of error exceeds the number of error-free.)

Re claim 3, Gan further discloses that wherein each frequency channel has a counter associated therewith, and further comprising incrementing the counter upon erroneous transmission and decrementing the counter upon error-free transmission, and determining interference in the frequency channel if the count exceeds a prescribed

threshold value. (In table 1, ten tests are conducted on each channel. When the

channel is found to be a bad channel the test result will yield low or high, depending

which type of test is being perfomed. Thus, incrementing the number of low or high

counts for each channel. And vice versa for good channels. Furthermore, its up to the

designer to decide if he/she wants to increment/decrement either the erroneous

transmission or the error-free transmission.)

Re claim 4, Gan further discloses that wherein detecting an erroneous

transmission comprises using checksums that are added to block-transmitted data at an

end thereof. (See col. 13, lines 13-18)

Re claim 5, Gan further discloses that wherein using checksums comprises

adding a CRC (Cyclic Redundancy Check) code to each data block at the end thereof.

(See col. 13, lines 30-38)

Re claim 6, Gan further discloses that wherein the data transmission method

comprises a timeslot method, and measuring the external signal strength comprises

measuring during unused timeslots. (One skilled in the art would know that measuring

and testing is usually performed during unused timeslots.)

Re claim 7, Gan further discloses that wherein measuring the external signal

strength comprises performing a field strength measurement based on the RSSI (Radio

Signal Strength Indication) method. (See col. 12, lines 36-39)

Re claim 8, Gan further discloses that wherein measuring the external signal

strength further comprises decrementing the counter if the measured strength is below

a prescribed threshold value. (See col. 15, line 1-25 and table 1. In table 1, ten tests

are conducted on each channel. In this case lets take channel "n-1". These tests may

be comprised of measuring the RSSI of each channel. If the RSSI is found to be low,

the test result will yield high, thus decrementing the number of counts and increasing

the possibilities that channel "n-1" will yield to be a good channel. Furthermore, it's up

to the designer to decide if he/she wants to increment/decrement either the erroneous

transmission or the error-free transmission to determine if the channel can be classified

as either good or bad.)

Re claim 9, Gan further discloses that wherein the frequency channel is

reinserted into the frequency hopping sequence as soon as the count reaches the value

zero. (In table 1, if the number of error is zero, meaning that each test performed on

each channel is found to be high, the channel will automatically be classified as a good

channel. Furthermore, if we set the counter equal to the total number of tests

performed on each channel, and every single test performed on each channel yields

low, then we can say that the channel is classified as a bad channel and the counter

has reached zero.)

Re claim 10, Gan further discloses that wherein measuring the external signal strength further comprises setting the counter to its maximum count if the measured strength exceeds a prescribed threshold value. (See col. 15, line 4 & table 1. If the RSSI is found to be high, the test result will yield a bad channel. Furthermore, it's up to the designer to decide if he/she wants to set the counter to maximum/minimum whenever the test result yield low or high. Subsequently, high and low can be interpreted as either being 1 or 0, respectively.)

Re claim 11, Gan further discloses that a method for data transmission between at least two stations via radio links using the frequency hopping method and the frequency channel selection method of claim 1. (See col. 17, lines 35-37)

Re claim 12, Gan further discloses that wherein the method is based on one of the transmission standards Bluetooth, WDCT, DECT or HomeRF. (See col. 7, lines 51-52)

Claim 13 has been analyzed and rejected w/r to claim 1 above.

Claim 14 has been analyzed and rejected w/r to claim 2 above.

Claim 15 has been analyzed and rejected w/r to claim 3 above.

Claim 16 has been analyzed and rejected w/r to claim 3 above.

Claim 17 has been analyzed and rejected w/r to claim 3 above. Furthermore, see col. 16, lines 8-17 & col. 15, lines 7-10, whereby interference is determined by utilizing the packet loss ratio method.

Claim 18 has been analyzed and rejected w/r to claim 1 above.

Claim 19 has been analyzed and rejected w/r to claim 8 above.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon Flores whose telephone number is 571-270-1201. The examiner can normally be reached on Mon-Fri 7-5pm Alternate Fridays off.
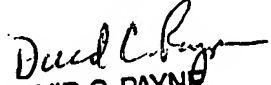
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LF
April 9, 2007

DAVID C. PAYNE
SUPERVISORY PATENT EXAMINER